

IN THE SPECIFICATION

Please replace the paragraph beginning at page 8, line 2 with the following paragraph:

A wavelength division demultiplexing section 20 wavelength-division-demultiplexes wavelength signals λ_1 to λ_N input through the input ports INPUT 1 to INPUT N and the add port Add. The wavelength division demultiplexing section 20 includes N+1 wavelength division demultiplexers (WDMs). An input interface section 30 converts optical frames input from the wavelength division demultiplexers into electric signals for processing and then converts the electric signals back to optical signals. To the output terminals of one wavelength division demultiplexer, N input interfaces, corresponding to the wavelength signals λ_1 to λ_N , are connected. An optical switch, i.e., an on-off gate switch 40 performs high-speed switching of the optical frames output from the input interface section 30. An output interface section 50 processes the optical frames switched by and output from the optical switch 40. A wavelength division multiplexing section 70 wavelength-division-multiplexes the outputs of the output interface section 50 and transmits the multiplexed outputs to another large-capacity optical router. A drop interface section 60 processes the optical frames to be output from the wavelength division multiplexing section 70 and transmitted to the lower IP router. A header processing section 75 recognizes header information for controlling the optical router. An optical switch control section 80 controls the connection state of the optical switch for switching the optical frames. A header reinserting section 90 reinserts headers into the outputs of the optical router. An edge traffic aggregator 100 includes an ingress part 100-1 and an egress part 100-2. The ingress part 100-1 converts IP packets input from the IP router into optical frames, and the egress part 100-2 converts the optical frames into IP packets and transmits the converted packets to the IP router.